

Notice of Allowability

Application No.

09/709,187

Applicant(s)

RACCAH ET AL.

Examiner

Art Unit

Liang-che Alex Wang

2155

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 2/6/2007.
2. ☒ The allowed claim(s) is/are 1, 6, 7, 8, 11, and 13 (renumbered as 1-6).
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

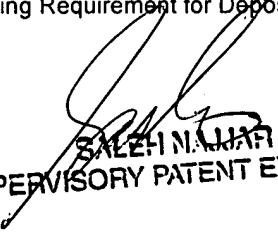
Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


SALEH M. AL-JAR
SUPERVISORY PATENT EXAMINER

EXAMINER'S AMENDMENT

1. Claims 1, 6-8, 11, and 13 are allowed.
2. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.
3. Authorization for this examiner's amendment was given in a telephone interview with David Alberti (Reg. No. 43,465) on 03/08/2007.
4. The application has been amended as follow:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (currently amended): A file storage system, comprising:

a plurality of system servers connected to one another by a communication network having at least one node, wherein each system server includes at least one process that provides a file storage system function independent of the states of other system servers in response to a request to the file storage system that ~~may~~ is capable of affecting multiple system servers, and wherein the file storage system functions include:

at least one file storage gateway service that includes a plurality of file storage gateway servers, each file storage gateway server hosting at least one client process that can process client requests and pass the resulting set of requests to the file storage system and including a process that ~~may~~ is capable of accessing at least one server directory to determine the location of a system server that can service a generated client request;

Art Unit: 2155

at least one file data storage server service that includes a plurality of file data storage servers, each file data storage server including a process that accesses file data storage objects stored in the storage system independent of the file data storage objects accessed by other file data storage servers; and

at least one file metadata service that includes a plurality of file metadata servers, each file metadata server including a process that accesses a set of file metadata independent of the file metadata sets accessed by other file metadata servers;

wherein the at least one instance of a file data storage server service and at least one instance of a file metadata service are separate from each other such that the services are scalable independently of each other; and

wherein the at least one file storage gateway service is capable of locating a file metadata server corresponding to a file in response to a request, receiving metadata for the file from the located file metadata server, and locating one or more corresponding file data storage servers for the file using the received metadata, wherein the file metadata server and file data storage server are separate and independent from each other.

Claims 2-5 (canceled)

Claim 6 (previously presented): The file storage system of claim 1, further including:

at least one server directory that includes location information and service capabilities of the system servers, the at least one server directory providing at least one server location in response to a request to the file storage system.

Claim 7 (previously presented): The file storage system of claim 1, further including:

a routing request server that provides system server location information in response to a request to the storage system, the location information corresponding to a system server that is capable of servicing the request.

Claim 8 (currently amended): A file storage system, comprising:

Art Unit: 2155

a plurality of servers arranged into at least two services, each service providing different file storage system functions independent of the status of any other service, and the servers of each service being functionally de-coupled from one another, servicing requests, which may affect multiple servers, independent of the operation of other servers of the service, the services including:

a file data storage server service comprising a plurality of file data storage servers that provide access to files stored in the file storage system, each file data storage server including an initialize function that may provide file data storage server location and file data storage server capability information, and

a file metadata service comprising a plurality of file metadata servers that provide access to metadata for files stored in the file storage system, each file metadata server including an initialize function that may is capable of provide providing file metadata server location and file metadata server capability information; and

a server directory process that receives information for a file storage system request and server location and capability information from the file data storage and file metadata servers, and that provides information to locate a server capable of servicing the request;

wherein at least one instance of a file data storage server service and at least one instance of a file metadata service are separate from each other such that the services operate independently of each other; and

a plurality of file storage gateway servers, each file storage gateway server including a process that can access the server directory process to determine a location of a server capable of servicing a request and then access the server at the location to service the request, wherein the file storage gateway servers are capable of locating a file metadata server corresponding to a file in response to a request, receiving metadata for the file from the located file metadata server, and locating one or more corresponding file data storage servers for the file using the received metadata.

Claims 9-10 (canceled)

Art Unit: 2155

Claim 11 (previously presented): The file storage system of claim 8, wherein:
the file metadata server capability information includes a quality of service value.

Claim 12 (canceled)

Claim 13 (previously presented): The file storage system of claim 8, wherein:
the storage server capability information includes a set of files accessible by the
file data storage server.

Claims 14-20 (canceled)

Reason for allowance

5. The following is an examiner's statement of reasons for allowance: the prior art of record does not teach wherein the at least one file storage gateway service is capable of locating a file metadata server corresponding to a file in response to a request, receiving metadata for the file from the located file metadata server, and locating one or more corresponding file data storage servers for the file using the received metadata, wherein the file metadata server and file data storage server are separate and independent from each other, in lights of other limitation described in independent claims 1 and 8.
6. Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."
7. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Liang-che Alex Wang whose telephone number is (571)272-3992. The examiner can normally be reached on Monday thru Friday, 8:30 am to 5:00 pm.

Art Unit: 2155

8. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Saleh Najjar can be reached on (571)272-4006. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.
9. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free)..

Liang-che Alex Wang
March 8, 2007



SALEH NAJJAR
SUPERVISORY PATENT EXAMINER